U.S. ARMY CHEMICAL MATERIALS AGENCY

Pine Bluff Integrated Binary Production Facilities demolition

Operators at the Pine Bluff Integrated Binary Production Facilities dismantle equipment from the former DC Production Facility. 2007.

The U.S. Army constructed the Pine Bluff Integrated Binary Production Facilities (IBPF) to produce binary chemicals and fill binary chemical munitions. These munitions were designed to mix two non-lethal chemicals to form a chemical agent while in flight to a target.

The IBPF consisted of five related production facilities. These were the DF Production/ M20 Canister Fill and Close Facility (built by Lummus Crest), BLU-80/B VX-2 Bigeye Bomb Fill and Close facility (built by RM Parsons), the QL Production Facility (built by Combustion Engineering), the DC Production Facility (built by Combustion Engineering), and the Multiple Launch Rocket System Injector Fill and Close Facility (built by RM Parsons).

In accordance with U.S. law and international obligations, the U.S. Army Non Stockpile Chemical Materiel Project (NSCMP) completed demolition of the IBPF Dec. 21, 2006, more than four months ahead of the Chemical Weapons Convention (CWC) treaty deadline of April 29, 2007.

Demolition began in October 2003 resulting in the destruction of buildings and related equipment at all IBPF components except the Multiple Launch Rocket System Injector Fill and Close Facility. Site restoration at these locations has also been completed.

Approximately 2,800 tons of metal were recycled from the IBPF.

Background

The IBPF consisted of chemical production plants and three munition fill buildings. Construction began in 1982 and halted in 1991, when officials placed the plants and buildings on layaway status following the signing of bilateral agreements between the United States and the Soviet Union. The agreements called for a halt to chemical weapons production by both countries and destruction of each country's chemical weapons stockpiles. These agreements led to the development and adoption of the CWC.

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Ratified by the U.S. Senate in April 1997, the CWC requires the destruction of all chemical weapons production facilities, prohibits chemical weapons production and stockpiling of chemical weapons and mandates destruction of all chemical weapons stockpiles. IBPF demolition fell under the terms of the CWC and was verified by international inspectors.

DF Production/M20 Canister Fill and Close Facility

The only facility to operate at the IPBF, the DF Production/M20 Canister Production Facility produced the binary precursor methylphosphonic difluoride (DF), inserting the chemical into coffee can sized M20 canisters for use in the M687 155 mm Binary Artillery Projectile. The second canister needed for the M687, dubbed the M21, held a solution of isopropyl alcohol and isopropylamine (OPA). OPA was manufactured and filled under contract by the Marquardt Corp. Constructed from 1981-1985, it operated from 1988 to 1990. Officials declared this facility destroyed in May 2005.

The BLU-80/B Bigeye Bomb fill facility

Construction began in 1986 and ended in February 1990. Designed for delivery by fixed-wing aircraft, the Bigeye bomb would have carried the binary precursor QL and a sulphur-filled ballonet. The Army completed facility prove out in 1990 and placed the building in layaway status in 1993. The sulphur-filled ballonet would have been manufactured and filled under contract. Operators made a small number of prototype bombs, some of which underwent testing but all of which were destroyed. The first completed phase of IPBF demolition, officials declared this facility destroyed in October 2004.

The DF Production Facility towers were demolished in early January 2005.

QL Production Facility

QL Production Facility would have produced the binary precursor chemical and o-ethyl-o-2-diisopropylaminoethyl methylphosphonite (QL). Construction began in 1987 and ended in 1990.

The DC Production Facility

DC Production Facility would have provided a chemical needed to produce DF that was unavailable from the private sector. The Army completed construction and partial prove out in 1990. The facility was laid away in 1993 Operators tested a DC reactor but never produced DC itself. Officials declared this facility destroyed in May 2005.

Multiple Launch Rocket System/Pine Bluff Binary Destruction Facility

Construction of the Multiple Launch Rocket System (MLRS) Chemical Warhead Injector fill facility began in 1989 and ended in 1991. Operators anticipated filling the warhead injector with DF made at the DF production facility, but never did. MLRS prototypes were tested but the weapon was never produced. Officials conducted a limited prove out of the equipment in 1991 and laid it away in 1993.

NSCMP reutilized the MLRS building as the Pine Bluff Binary Destruction Facility (PB BDF). DF neutralization began Dec. 16, 2005, ending April 6, 2006. QL inventory neutralization began June 5, 2006 and ended on Sept. 27, 2006. After PB BDF operations concluded, the building was demolished, completing the overall IBPF demolition project in December 2006.